

Name: _____ TP: _____

Form A

HW#76: PLAN it UP #5

Geometry

Due Date: Tuesday, March 18th, 2014

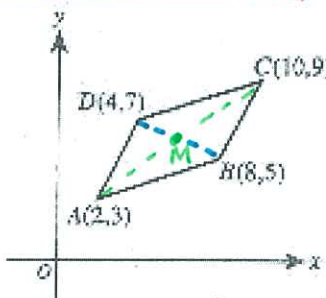
Failure to show all work (mark up all diagrams and write out needed formulas) and/or write in complete sentences will result in LaSalle.

rectangles, trapezoids, rhombus.

1) Summarize everything you know about quadrilaterals and squares specifically. Include as MUCH information as you can, and write in complete sentences. You should have no fewer than 4 complete sentences. Don't look at your notes!

1)

As shown in the standard (x,y) coordinate plane below, parallelogram ABCD has vertices A(2,3), B(8,5), C(10,9), and D(4,7). The midpoint of AC is the same as the midpoint of what other segment?



Find the other midpoint.
 $\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$

2)

A formula commonly used to calculate distance traveled is $d = rt$, in which d is distance, r is rate, and t is time traveled. How many hours will it take you to travel 360 miles at an average rate of 45 miles per hour?

- A. 0.125
- B. 1.25
- C. 8
- D. 315
- E. 16,200

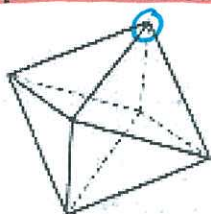
$d = 360$ miles
 $r = 45$ mph
 $t = \boxed{}$ hrs.

you will need to convert. units should end in hours.
down in an hour.

$$d = r \cdot t$$

3)

The point at the intersection of 4 faces of an octahedron (shown below) is called a vertex point. How many vertex points does an octahedron have?



- F. 6
- G. 8
- H. 12
- J. 16
- K. 24

There are multiple SIDES to this shape.

3b) Explain how you know your answer is correct for #3. What was your reasoning?

4) The area of a square is 36 in^2 . What is its perimeter?

$A = \text{side squared}$

↳ adding all sides.

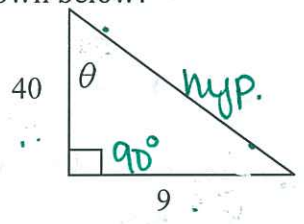

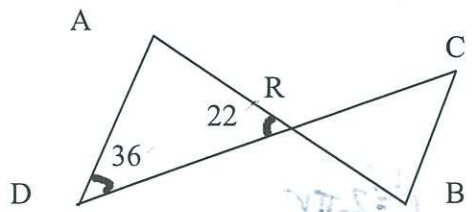
$$\sqrt{36 \text{ in}^2}$$

5) The circumference of a circle is $256\pi \text{ m}$. What is its area?

$A = \pi r^2$ (for a circle)

$$C = 2\pi r$$

Z-E-S-T-Y ...THAT'S THE WAY WE SPELL ZESTY. Zesty!

<p>6) A new rectangular soccer field is being constructed at John Adams High School. The length of the field must be $(4x - 3)$ yards and the width must be $5x$ yards. Which of the following expressions in terms of x gives the number of square yards of grass needed to cover the field?</p> <p>F. $x - 3$ G. $9x - 3$ H. $20x - 15x^2$ J. $15x^2 + 9x$ K. $20x^2 - 15x$</p> <p style="text-align: center;">$-(- - -) =$</p>	<p>6b) Explain how you know your answer is correct for #6. What was your reasoning?</p> <p>① Find the side lengths ② What theorem should you use to find the diagonal?</p>
<p>7) Simplify: $\frac{2^3 - \sqrt{6}}{\sqrt{81} - \sqrt{(2+7)^2}}$</p> <p>Top: $2^3 - \sqrt{6}$ Bottom: $\sqrt{81} - \sqrt{(2+7)^2}$ Together: _____</p> <p style="text-align: center;">tangent</p>	<p>8) A square has an area of 196 m^2. What is the length of the diagonal of the square?</p> <p>length of this = ? Area of the entire \square is 196 m^2.</p>
<p>9) What is the <u>tangent</u> of θ in the right triangle shown below?</p> 	<p>10) Triangle ABC lies in the standard (x, y) coordinate plane, with points $A(-2, 3)$, $B(-3, -5)$, and $C(1, -8)$. The triangle is translated six units to the right creating triangle DEF. Then the triangle is reflected across the x-axis creating triangle GHI. What are the coordinates of point G?</p> 
<p>11) In the figure below, \overline{AB} and \overline{CD} intersect at point R. $\overline{AD} \parallel \overline{CB}$, and the angle measures are as marked. Find $m\angle B$</p>  <p>Find $m\angle B$ by finding ALL angles. → Vertical, $\angle s = 180^\circ$, etc.</p>	<p>12) At Boston Market, cashiers earn a total of \$320 each week. If 11% of their pay is withheld for taxes, insurance, and other deductions, what is the take-home pay of each employee?</p> <p>$\\$320 * 11\%$ → move the decimal.</p> <p>*withheld... add or subtract from total?</p>

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Name: _____ TP: _____

Form A

HW#77: PLAN IT UP #6

Geometry

Due Date: Wednesday, March 19th, 2014

Failure to show all work (mark up all diagrams and write out needed formulas) and/or write in complete sentences will result in LaSalle.

1) Summarize everything you know about quadrilaterals and rectangles specifically. Include as MUCH information as you can, and write in complete sentences. You should have no fewer than 4 complete sentences. *Don't* look at your notes!

1) Brian is going to cover his kitchen with tiles, and he plans to put the tiles next to each other so there is no space in between them. The tiles are rectangular prisms that are 6 inches tall by 3 inches wide by 8 inches long. If Brandon's kitchen i measures 6 feet by 7 feet, what is the minimum number of tiles he will need to fully cover his kitchen floor?



Use the BIGGEST dimensions of the tile (8x6)

2) Joe's T-shirt Shop sells custom t-shirts. Customers must choose one of three possible colors, whether they want long or short sleeves, and may choose to add any of three different quotations. If shirts are offered in small, medium, large, and extra-large how many different combinations of shirts are there?

3 different colors
2 styles (long or short sleeve)
3 different quotes
4 different sizes.

what operation should you use?

3) At what point or points does the graph of $2x - 4y = 10$ cross the x-axis? The y-axis?

SKIP

4) Solve for b: $Q = M(2 + rb)$

$$\frac{Q}{M} = \frac{M(2 + rb)}{M}$$

$$\frac{Q}{M} = 2 + rb$$

FINISH!

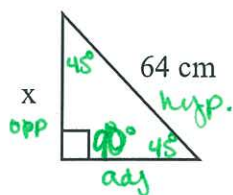
5) Simplify: $\frac{a^2 b^{-3} c}{a^3 b c}$

$$\frac{a^2}{a^3} \cdot \frac{b^{-3}}{b} \cdot \frac{c}{c}$$

6) Simplify: $\frac{a^3 b^{-2} c^4}{a^3 b c}$

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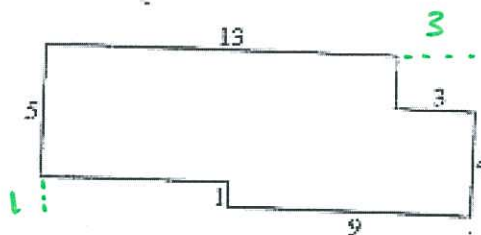
7) The triangle shown below is an isosceles right triangle (hint: what does this mean about the base angles?). Find the measure of side length x. Leave your answer in radical form.



SOH CAH TOA

8a) What is the perimeter? b) What is the area?

L.W



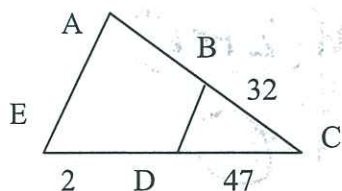
9) Maddie is performing an experiment at home. Ice cream bowls are lined up next to each other with no space inbetween. There are 3 rows of bowls along the width of the table, and 5 columns of bowls along the length of the table. The radius of one bowl is 2 inches. Maddie is throwing pennies onto the table in attempt to get the penny into an ice cream bowl. If Maddie is guaranteed to get the penny onto the table, what is the probability that it goes into one of the bowls, rounded to the nearest percent?

SKIP

10) At Subway, customers are allowed to make their own sandwiches. Customers can choose between 4 different types of bread, 15 different toppings, and 3 different sauces. When customers order the Daily Special, they can choose one type of bread, one topping, one sauce, and whether or not to add spices. Which of the following gives the number of different possible combinations for the Daily Special?

LOOK @ #2!

11) In the figure below, A, B and C are collinear and E, D, and C are collinear. ACE is a triangle and $\overline{BD} \parallel \overline{AE}$. Find the length of segment \overline{AC} .

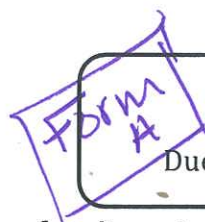


12) It takes two revolutions when Andy's tire travels 400 centimeters. To make his tire more enticing, he adds a decoration to his tire. The decoration covers exactly half of the wheel, as shown in the picture below. What is the area of the decoration? Leave your answer in terms of pi.



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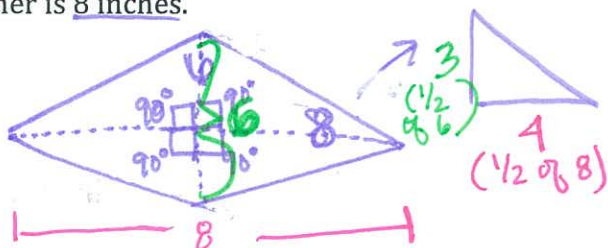


HW#78: Rhombus Properties
Geometry

Due Date: Thursday, March 20th, 2014

Failure to show all work (mark up all diagrams and write out needed formulas) and/or write in complete sentences will result in LaSalle.

1) One diagonal of a rhombus is 6 inches and the other is 8 inches.



a. How long is each side of the rhombus?

$$a^2 + b^2 = c^2$$

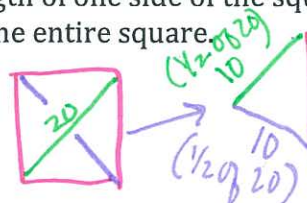
b. Find the perimeter.

use Pythag. $a^2 + b^2 = c^2$
ADD them up!

c. Find the area.

$$A = \frac{1}{2} \cdot D_1 \cdot D_2$$

2) The diagonal of a square is 20 cm. Find the length of one side of the square and the perimeter of the entire square.



a. How long is each side of the square (rounded to the nearest tenth)?

b. Find the perimeter.

c. Find the area.

3) Name each quadrilateral—*parallelogram*, *rectangle*, *rhombus*, and *square*—for which the statement is true (can be more than one).

a. It is equilateral.

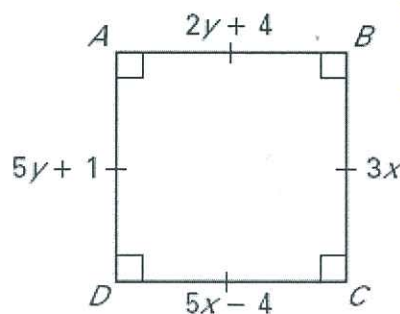
b. The diagonals are congruent.

SKIP

c. It can contain obtuse angles.

d. It contains no acute angles.

4) Classify the special quadrilateral. Explain your reasoning. Then find the values of x and y .



All sides are \cong ,
so set them
equal to each other
to solve!

Z-E-S-T-Y ...THAT'S THE WAY WE SPELL ZESTY. Zesty!

5) A fence surrounds a yard that is 42 feet by 14 feet. What is the approximate length, in feet, of the fence?

DRAW THIS. Label sides. Add sides.

6) Simplify: $2x^2 4xy^7 15xy^3$

① Multiply #'s
② Add x's
③ Add y's

7) Airiana works 230 days a year and earns a salary of \$18,000. She recently took an unpaid day off of work to get her nails done. The company pays temporary replacement \$90 a day. How much less did the company have to pay in salary by paying the replacement instead of Airiana that day?

*salary: \$18,000
missed 1 day: \$90*

SKIP

8) On his first four 100-point tests this quarter, Javi has earned the following scores: 77, 52, 95, 79. What score must he earn on the fifth, 100-point test in order to earn an average test grade of 82 for all five tests?

multiply then divide.

$$\frac{77 + 52 + 95 + 79 + x}{5} = 82$$

9) Linnea has 5 bows, 10 earrings, and 13 necklaces. How many distinct sets of accessories, each consisting of a necklace, a pair of earrings, and a bow, can Linnea choose?

Set = 1 of each

*13 = necklaces
10 = earrings
5 = bows*

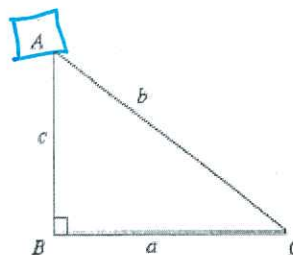
10) At a factory, 5,000 tons of grain are required to make 50,000 tons of bread. How many tons of grain are required to produce 9,000 tons of bread?

$$\frac{5,000 \text{ ton (grain)}}{50,000 \text{ tons (bread)}} = \frac{9,000 \text{ tons (bread)}}{x}$$

11) If a rectangle measures 43 meters by 11 meters, what is the length, in meters, of the diagonal of the rectangle?

DRAW! Pythagorean!

12) For right triangle ABC below, what is sin A?



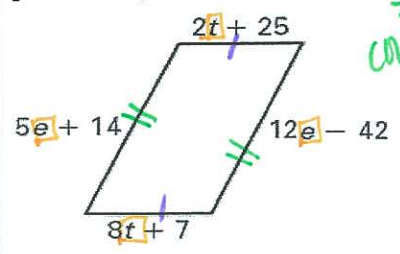
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Form A

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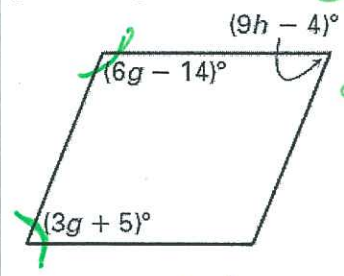
Failure to show all work (mark up all diagrams and write out needed formulas) and/or write in complete sentences will result in LaSalle.

1) Find the value of each variable in the parallelogram.



*The sides that are congruent... Set EQUAL to each other!

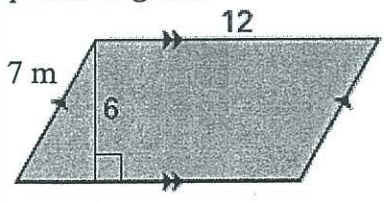
2) Find the value of each variable in the parallelogram.



① Green angles are supplementary. They add to 180°!

② $\angle 9h - 4$ is equivalent to $\angle 3g + 5$. WHAT should you do?

3) Find the a) perimeter and b) area of the parallelogram.



$P = 2(a + b)$
 $A = b \cdot h$

4) If the area of a ~~parallelogram~~ ^{was 2 parallel sides.} is 630 in^2 and the height is ~~the~~ ^{three} times the base find the measures of the height and base. Round every step to the nearest tenth.



$A = B \cdot H$
 $630 = B \cdot \square$

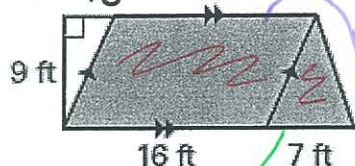
$A = 630 \text{ in}^2$
 $h = \text{base} \times 3$
 $b = \square$

*Solve!

5) Find the area of the shaded polygon. **turn over**

6) Find the area of the parallelogram. **turn over**

6) Find the area of the shaded polygon.

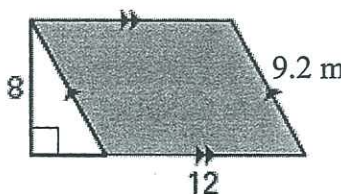


$A = \text{parallelogram}$:

$A \text{ of } \triangle$:

Now combine both areas.

6) Find the area of the parallelogram.



$$A = b \cdot h$$

*Which is the height?
8 or 9.2?

7) A fence surrounds a yard that is 22 feet by 16 feet. What is the approximate length, in feet, of the fence?

$$L = \boxed{?} \quad h = 22 \text{ ft} \quad \text{width} = 16 \text{ ft}$$

8) Simplify: ~~10x^3y \cdot 2x \cdot 3xy^2~~ $10x^3y \cdot 2x \cdot 3xy^2$

9) Airiana works 340 days a year and earns a salary of \$112,000. She recently took an unpaid day off of work to get her nails done. The company pays temporary replacement \$210 a day. How much less did the company have to pay in salary by paying the replacement instead of Airiana that day?

this was skipped in HW 78

SKIP

10) On his first four 100-point tests this quarter, Javi has earned the following scores: 78, 53, 92, 76. What score must he earn on the fifth, 100-point test in order to earn an average test grade of 82 for all five tests?

SKIP

same prob on HW 78

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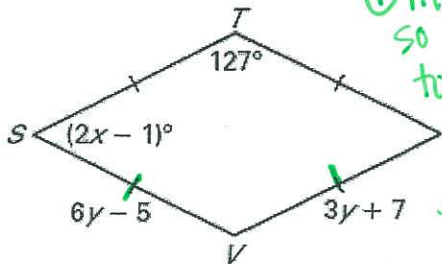
Form A

HW#80: Trapezoids
Geometry

Due Date: Tuesday, March 25th, 2014

Failure to show all work (mark up all diagrams and write out needed formulas) and/or write in complete sentences will result in LaSalle.

- 1) Classify the special quadrilateral. Explain your reasoning. Then find the values of x and y .



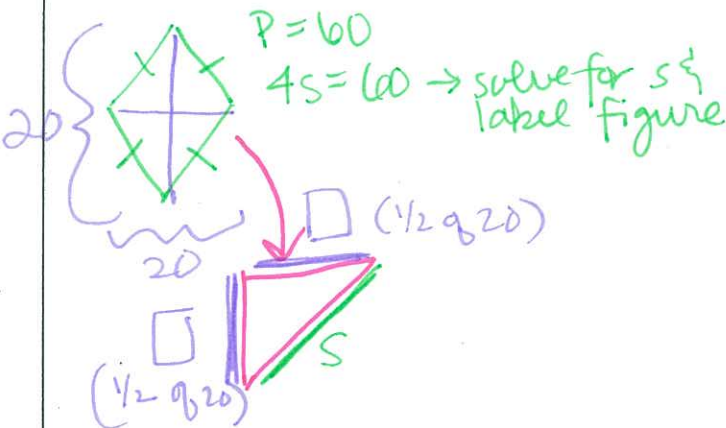
① All sides are \cong so set them to each other!
② All \angle s are \cong so set them!

- 2) The lengths of the diagonals of a rhombus are 10 and 24 meters. A) Find the perimeter of the rhombus. B) Find the area of the rhombus.

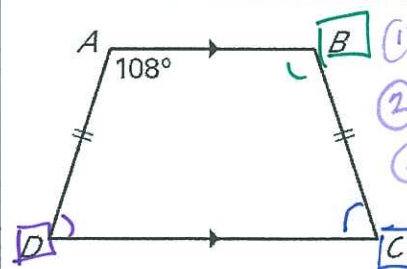
Similar prob on HW 78
minus 1 question

SKIP

- 3) The perimeter of a rhombus is 60 feet and one of its diagonals has a length of 20 feet. Find the area of the rhombus. Round each step to the nearest tenth.

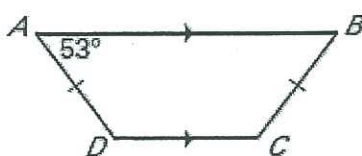


- 4) Find the measures of angles B, C, and D.



① $\angle A \cong \angle B$
② $180 - \angle A = \angle D$
③ $180 - \angle B = \angle C$

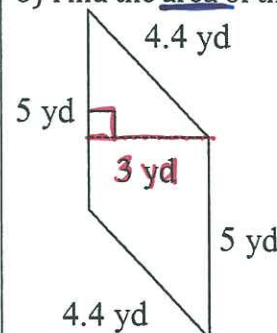
- 5) Find the measurements of angle B, C, and D.



Follow steps for #4

move space on back

- 6) Find the area of the parallelogram below.



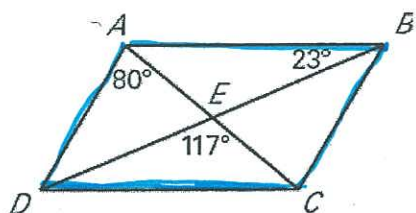
$A = b \cdot h$

move space on back

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6.)

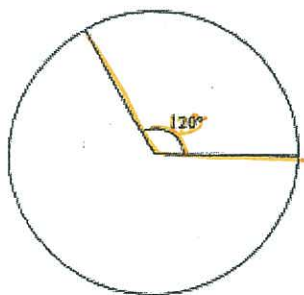
7.)

7) Find the indicated measure in ABCD below.

- $m\angle AEB$
- $m\angle BAE$
- $m\angle AED$
- $m\angle ECB$
- $m\angle BAD$
- $m\angle DCE$
- $m\angle ADC$
- $m\angle DCB$

- Use vertical \angle s!
 - Remember, Δ s add to 180°

8) In a circle with diameter 15 inches, shown below, how many inches in length is an arc that has a central angle of 120 degrees?

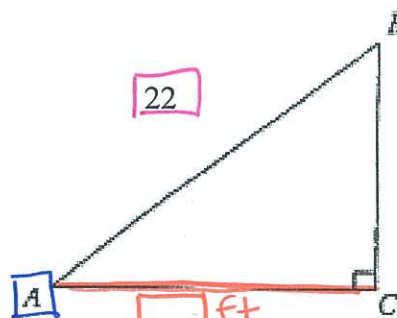


diameter = 15 in

$$2\pi r \cdot \frac{120}{360}$$

$$15 \cdot \frac{1}{3} = 5$$

9) The hypotenuse of the right triangle ABC shown below is 22 feet long. The cosine of angle A is $\frac{4}{5}$. About how many feet long is segment AC?



$$\cos(A) = \frac{4}{5}$$

Z-E-S-T-Y ...THAT'S THE WAY WE SPELL ZESTY. Zesty!

10) A painter leans a 25 foot ladder against a house. The side of the house is perpendicular to the level ground, and the base of the ladder is 10 feet away from the base of the house. To the nearest foot, how far up the house will the ladder reach?



round (whole #)

11) Jessica wants to draw a circle graph showing the favorite teachers at her school. Her classmates chose the following in a poll: 25% said Ms. Mason, 22% said Ms. Ziegler, 26% said Ms. Young, and 27% said Ms. Fischer. What will be the degree measure of Ms. Mason's sector on the graph?

ms. Mason = 25%

Ms. Ziegler = 22%

Ms. Young = 26%

Ms. Fischer = 27%

- Draw the circle graph
- Find the degrees for Ms. Mason's section.

Remember,
a circle has
360°

